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ABSTRACT

This paper describes a self-study by doctoral students serving as university mentors, supervisors, and researchers in a preservice teacher education program; and presents a second-order action analysis of this first-order action research. The action research reported focused on the teaching of action research, teacher education practices, and a study of the role of action research in teacher education. The theoretical perspectives shaping the study included philosophies of teacher education; individual first-order action research studies; and the authors' views of action research as a self-reflexive systematic process. Data were collected using preservice teachers' journals, lesson plans, surveys, interviews, research notebooks, and field observation notes; these data were analyzed through memos, reflective journals, weekly conversations with response groups, starting point speeches, and data workshops. Additional feedback was derived from other members of the class. Themes emerging from the research included issues of power and voice, awareness of professional growth, and reflective practice. Six tables and an explanation of acronyms and coding used are appended. (Contains 38 references.) (CK)

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LOOKING AT OURSELVES LOOK AT OURSELVES: AN ACTION RESEARCH SELF-STUDY OF DOCTORAL STUDENTS' ROLES IN TEACHER EDUCATION PROGRAMS

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Presented at the Annual Meeting of the American Educational Research Association
(New York, NY, April 8-12, 1996)

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Looking at Ourselves Look at Ourselves: An Action Research Self-Study of Doctoral Students' Roles in Teacher Education Programs

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Doctoral students constitute a significant part of the staff of teacher education programs at our state university and at other research universities. However, little research has been done on their roles as mentors, supervisors, and researchers in pre-service teacher education programs (Lourie, 1982). To fill this research gap, while simultaneously improving practice, a group of doctoral students who serve in those roles at this university and a faculty member, engaged in a self-study of our teacher education practices. In addition, we performed a second-order analysis of our own action research. This second-order action research analysis has produced insight into our roles as doctoral students in teacher education programs, and has generated recommendations for the improvement of teacher education at the university. In addition, while research has been done on action research by preservice and inservice teachers for the improvement of practice (e.g., Gore and Zeichner, 1991; Zelazek and Lamson, 1992) and school restructuring (Sagor and Curley, 1991), and while action research has been done by graduate students on action research done by preservice teachers (Noffke and Zeichner, 1987), there has been little research done on action research by doctoral students on their roles in pre-service teacher education. Therefore this self-study not only documents an innovative research methodology, but also begins to fill a research gap.

Theoretical Perspectives

The study that we are reporting on here can be viewed as having three distinct components: first order action research on the teaching of action research,

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first order action research on teacher education practices, and a second order study of the role of action research in teacher education. The first two components are related to the roles that each of us has or had in the teacher education programs at our state university. For one of us (Allan), those roles are as a faculty member in secondary teacher education and instructor of a course on doing action research. He has done and continues to do action research on his practice as instructor (Feldman, 1995). The others of us who have participated in this study (Barbara, Deborah, Elizabeth, Jim, John, and Margaret) also have multiple roles: we were or are doctoral students, who served as student teacher supervisors, teaching assistants, and instructors in the teacher education programs, and were enrolled in the course on action research. In the third component we joined together to collaborate as co-researchers as we looked at the effect that our participation in action research has had on our teacher education practices.

Because of the complex nature of our study, it is important that we acknowledge three different theoretical perspectives that have informed and shaped it. The first is the philosophies of the teacher education programs in which we acted as instructors and supervisors. Although the structures of the teacher education programs (early childhood, elementary education, and secondary education) vary significantly from one another, each views teacher education as an apprenticeship process that lasts over the teacher's career. They share the assumption that much of the learning of how to teach occurs during the first few years of teachers' careers, and that the learning process, which is constructivist, can be shaped and enhanced through reflection on practice as well as past experiences as a student, and through participation in critical discussions, based on the research literature, about the nature of teaching, learning, and educational systems. As a result of this orientation toward teacher education, we each serve as mentors as we instruct and supervise.

And because our roles as doctoral students in the teacher education programs are apprenticeships for us as teacher educators, we have been encouraged to reflect critically on our own practice. This research project has helped us to take our reflection further into the domain of action research.

The two additional theoretical perspectives are in the domain of action research. There are two because we were involved in first- and second-order action research, each with its own theoretical perspective. Our first-order action research, which were individual studies done in the setting of collaborative conversation (Hollingsworth, 1994), and the second-order action research analysis, which we report on in this paper, share a common definition of action research. We see action research as a self-reflexive process that is systematic, critical inquiry made public (Stenhouse, 1975). We assume that the goal of action research is both the improvement of practice and an improved understanding of the educational situation in which our practices are immersed. Defined in this way, we see action research as a methodology, an orientation towards doing research, rather than a particular set of quantitative or qualitative methods. With our broad definition of action research, the methods that we chose to use in our first-order studies followed from the orientation of the questions or problems that guided our research.

Our definition of action research allows for a variety of ways it can be enacted. But because our first-order action research was done in the context of a university course, it is important to make explicit those models that Allan introduced and encouraged through the readings selected for the course (e.g. Altrichter, Posch, and Somekh, 1993; Cochran-Smith and Lytle, 1993). The first model was developed in the UK under the leadership of Lawrence Stenhouse (1975) and John Elliott (1991), among others. The second is an outgrowth of the work of the various Writing Projects (BAWP, 1979) and other centers, such as the Prospect School (Carini, 1978),

to encourage the teachers of writing to look critically at their own practice to improve it and to share what they have learned with other practitioners.

The first order action research was also influenced by the structure of the course and its relation to Allan's model for the enactment of action research, enhanced normal practice (Feldman, in press). In enhanced normal practice, teachers engage collaboratively in action research through three mechanisms: anecdote-telling, the trying out of ideas, and systematic inquiry. In the course, collaboration was fostered through the establishment of research notebook response groups that met outside of the scheduled class time, and through small group discussions following starting point speeches, and in data workshops that occurred in class. In these collaborative settings, Barbara, Deborah, Elizabeth, Jim, John, Margaret, and the other members of the class told anecdotes about their practice and their research that was responded to and questioned by the other members of their group. They then took ideas that came out of these meetings back to their practice, tried them out, and returned to their groups to engage in more anecdote-telling. These two mechanisms helped to guide and shape the systematic inquiry that we engaged in as individuals.

The model of action research as enhanced normal practice is based on a theoretical perspective that depends on two distinctions -- the first between knowledge and understanding, and the second between context and situation (Feldman, 1994b) -- and on the ways that knowledge and understanding grow through conversation (Feldman, 1994c). While research often leads to propositional knowledge, a product of human activity that is codifiable and can act as a commodity, the model of action research of enhanced normal practice also recognizes the construction of understanding through meaning making, both individually and in the collaborative group, as a legitimate outcome of participation

in the research process. This recognition is dependent on the postulate that human action is best understood by thinking about people as beings immersed in situations, rather than as actors in context (Heidegger, 1962). By conceptualizing being, acting, knowing, and understanding in this way, conversation then becomes a viable method for doing research (Feldman, 1994c), and action research can be seen to be constituent of not only conversation among people, but also as dialogue between people and situations (Feldman, 1994a).

Our second-order action research continued within the theoretical framework provided by enhanced normal practice but also relied on the development of grounded theory (Strauss and Corbin, 1990). In our second-order research, the reports we wrote as part of the first-order action research served as data from which categories of analysis were inductively derived. In addition, our varied experiences as instructors and supervisors in teacher education programs, as well as our previous experience as school teachers and students in teacher education programs, acted to frame our second-order research questions and to provide us with theoretical sensitivity (Strauss and Corbin, 1990). Simply put, we read and re-read each others papers to formulate and hypothesize theoretical categories, and then tested them through a coding process. This provided us with a check for construct validity for the second-order analysis, which we also checked against our personal and professional experience for face validity (Lather, 1991).

Description of the course

At this time, Allan has taught the action research class three times. Each time there have been approximately 20 students, with a good mix of men and women. Most of the class members are practicing teachers who are enrolled in masters or doctoral degree programs on a part-time basis. The others include principals, guidance counselors, and specialists in reading, computers, special education, and

students from the programs in international education, family therapy, and counseling psychology. Because of the large number of part-time graduate students in the School of Education, most courses are offered on a once-per-week basis for 14 weeks, and offered after school is let out. The action research course has met each year in the 7-9:30 PM time slot.

There were two main components of the course: readings and discussions of the theoretical literature on research and action research, and an introduction to the methods of research leading to the completion of an action research report by the end of the semester. The theoretical readings included books and articles by Carr and Kemmis (1988), Cochran-Smith and Lytle (1993), Elliott (1991), Hollingsworth (1994), and Schön (1983). The methods of research included types of data and ways to collect it, the keeping of a research notebook, and the use of collaborative groups for research. The first third of the course was devoted to finding a starting point for research and culminated with the starting point speeches. As data was collected class time was used for data workshops, opportunities for class members to present and critique on-going inquiries. During the final sessions, class members made oral presentations of their action research studies. The written reports were collected, duplicated, and distributed to all class members.

An important aspect of the course were the techniques used to promote conversations (Feldman, 1995). These techniques included research notebook response groups, the starting point speeches, data workshops, the use of electronic communications, and the oral final presentations. Each of these aided in the formation of communities of researchers who held critical conversations about their educational situations and the ways in which they researched them to come to a better understand of those situations and the ways that they attempted to improve them.

Methods of data collection and analysis

We researched our practice as teaching assistants and instructors in the teacher education programs at our state university as part of an action research graduate seminar. We collected data that included preservice student journals, lesson plans, surveys, interviews, research notebooks, and field observation notes. We analyzed data continuously through memos, reflective journals, weekly conversations with response groups, starting point speeches and data workshops.

We also kept action research notebooks that documented our personal investigations of our practice during this first-order action research. Our notebook entries included summaries of interactions with preservice students, notes on our practice and ideas for follow-up meetings with preservice students. Our action research notebooks included information gathered from references that we consulted. In addition to documenting field experiences in the action research notebooks, we participated in action research notebook response groups. During response group meetings we commented on one another's notebook entries both verbally and in writing. The response groups provided an opportunity for us to share preliminary findings and insights, receive on-going feedback and ideas for change, and provide general support as action researchers.

We received additional feedback from other members of the class in two ways. Early in the semester, we presented a starting point speech to a small subgroup of the class. The subgroup, composed of class members not in the presenter's research notebook response group, provided us with feedback on our preliminary research question as well as the research design. We then revised our speeches based on our reflection of our peers' responses. Periodic data workshops were part of the class, as well, in which we shared our preliminary data with, once again, a subgroup composed of different class members. The structure of the workshops was three-

fold: one researcher would share his or her findings, our peers would respond with questions rather than suggestions, and the researcher would then respond. Allan also provided written comments on the revised starting point speeches and interim reports.

First order results

The six first-order self-studies focused on the relationships between the doctoral student researchers and preservice students. Deborah examined student teachers' resistance in a seminar setting, particularly to the use of reflective writing assignments. Elizabeth looked at self-reflection as a promising idea in preservice teacher education. Margaret explored her concern that her educational practice was being overshadowed by her research interests, and affirmed the importance of the "research notebook response groups." In his study, Jim abandoned his search for formulaic responses to student teachers for a more contextualized approach. Barbara examined students' anger at previous educational experiences and how that affected their interaction with the doctoral student's practice as a math educator. John's self-study, which was reported in the form of a short story, explored the forces of socialization that acted on him and the preservice teachers with whom he worked. Following are brief descriptions of our first-order action research studies:

Deborah

For three semesters I had been the instructor of a seminar course required of all secondary student teachers. The underpinning rationale for the course was to provide a forum for processing their ongoing experiences, to provide concrete suggestions when needed and initiate the development of a way of thinking about teaching that would build a theoretical framework for their future work. During my tenure as graduate student instructor, I was puzzled by the various student teachers' reactions to the seminar, more specifically those reactions that might be labeled

resistant, reluctant or unwilling. I decided that I would use my fourth semester as instructor to engage in an action research study of the nature of this resistance.

At the onset of my work, I reflected on what I anticipated to be sources of resistance: systematic obstacles, developmental considerations, individualistic ideologies, and my personal projections. As the semester unfolded I recorded and reflected on the dynamics of the seminar in my action research notebook and found evidence for each source, as well as a need to name a fifth: resistance to writing. Systematic obstacles seemed the most palpable of all the issues: because the seminar was required, student teachers felt forced rather than personally compelled to participate. In addition, the seminar usually took place at the end of a long day teaching and at the beginning of a long evening of planning and correction. At the conclusion of my research I combined the second (developmental considerations) and third (individualistic ideologies) sources as they became intricately linked. I began to wonder if the individualistic nature of teacher breeds a natural resistance to sharing what's happening or not happening in one's classroom, and if that resistance lessens as the student teachers progress developmentally. Certainly it was evidenced in my research notebook that the further student teachers got into the semester, the more anecdotal and personal the reflections became.

The unexpected source of resistance came in the form of writing. Writing has always been a cornerstone of the work done in seminar based on the belief that, "How the mind works becomes visible through journal writing; educators can use what they find to change their own practice" (Holly, 1989, p.77). In actual fact, the seminar seemed to divide itself into two types: journal writers and those who clearly identified themselves as non-journal writers. Subsequently it wasn't surprising to find a strong strain of resistance to a format of reflection grounded in writing.

Finally, and for me most importantly as an educator and researcher, was the understanding I came to have about myself and the effects of personal projection on seminar resistance. Not only had my prior experiences as instructor of the course informed my current thinking, it had made me anticipate resistance. As a result, I found through reflecting on anecdotes recorded in my action research notebook that I was planning for resistance and aborting instructional plans. On a concrete level this understanding allowed me to make substantive changes in my teaching. For instance, I began using typed agendas for seminars so as to keep me true to my plans when I sensed resistance. We tried different meeting times and locations. Experienced teachers visited the seminar and shared openly about their early and current experiences in the classrooms. We also experimented with non-writing methods of making "the mind's work become visible." Pedagogical changes such as these would not have been made if I hadn't been engaged in action research.

Subsequently, the process of doing action research proved invaluable for me. Although it was labor intensive, it provided a format in which I could record and reflect on my work. On a personal level, it opened me up to recognizing life patterns of anticipation and projection. It is that recognition through reflection that will certainly inform my future growth not only as an educator, but as a person as well.

Elizabeth

Agreeing to supervise student teachers in a teacher education program, I saw the manifold possibilities of professional and emotional growth both for me and the student teachers, and decided to take on the challenge. The result of this challenge was an action research project on my role as student teacher supervisor. As supervisor I wanted to allow these future teachers to experience the excitement of teaching in the most productive environment possible. Initially, I encountered seven apprehensive and cautious young women preparing to be elementary school

teachers. They had all taken the required courses to prepare them for student teaching, but the realities of the classroom were much greater than what they had read about in textbooks. My role, therefore, was to be crucial in their development as educators.

My concern was to define my role as the supervisor and supplant their fears with enthusiasm for teaching. I gave the student teachers a questionnaire that asked how they viewed the role of the supervisor in a teacher education program, and what qualities they thought the supervisor should have. Their replies clearly defined the supervisor's role as one of a "helping role." They said that supervisors should be kind, attentive to the needs of student teachers, and supportive of their roles as novices in the educational system. I took their suggestions seriously and adjusted my role as much as possible, creating a working and a helping relationship.

In post observation responses to their teaching, I gave suggestions for them to consider in subsequent lessons. The student teachers in turn reflected on their teaching experience, my comments and suggestions, and then wrote reflective papers. As the semester went on, however, I noticed that their self-reflections did not result in an improvement of teaching techniques. Dewey (1933) mentioned that reflective action involved an integration of attitudes and skills in the methods of inquiry - neither the skills nor the attitudes alone would suffice. Noffke and Zeichner (1987), in agreement with Dewey, also stressed inquiry as the basis for continued growth and fostering the development of reflective action. The issue of self-reflective practice became a pivotal point of interest for me.

I asked the student teachers to scan their journals and reflective papers, and choose a word that represented their growth. Some of their responses included, "comfortable," "willing," " awareness." I then asked them if there were anything

that I had said that was helpful to them. They pinpointed phrases such as "giving helpful or useful ideas," "I trust you," "you questioned the purpose of my lesson," and "you made me see the importance of visual images." Their honest and insightful observations gave me a clearer vision of my role and enabled me to understand the importance of self-reflection and its crucial place in student-teacher supervision.

Through self-reflection, which became a major focus of my study, student teachers actively participated in making decisions that affected their teaching. Their emerging voices empowered them to question, analyze, make hypotheses, implement their ideas in the classroom, revise their thinking and their practice, in short lay the groundwork as life-long learners as they began their teaching careers.

Margaret

In my action research project, I studied my practice in offering feedback to preservice secondary education microteaching students at the university. In the microteaching lab, seniors and post baccalaureate students - prior to their student teaching - engaged in practice teaching with local high school students as their students. While one microteacher instructed a group of six or seven students in 10-20 minute lessons, a second student teacher videotaped the lesson. Immediately following the lesson, the microteachers attended a feedback session. I was a facilitator at several of these feedback sessions.

During this study I collected and analyzed data from four different sources. First, micro-teachers and I kept and reflective journals. They responded to each others' journals, and in my own I included reflection on our feedback sessions and any thoughts about practical teaching craft knowledge that I might share with my students. The other sources of data were my written responses to each of their micro-teachings; my written recollections of our feedback sessions, which I wrote

immediately following those sessions; and the anecdotal records I wrote while microteachers taught, which I then shared with them during the feedback session.

Throughout the action research project I participated in a research notebook response group of colleagues, all members of the action research class, similarly engaged in research into their own practices. During our weekly notebook response group meetings, six of us exchanged stories of our research, its effects on our practices. We discussed any glitches in our research that occurred during the week, made suggestions, offered advice and encouragement as we continued apace with our respective projects. Our group became a tight-knit community and through the suggestions and encouragement of my colleagues, I was able to overcome my hesitation at seeking permission from the microteachers to use their journals in this study.

I feared that by asking for their journals I would inhibit my rapport and trust and sense of community that I felt I shared with my students. I felt strongly about the establishment of a level playing field between the researched and the researcher. As part of the methodological research for my study, I looked at emancipatory research, and sharing research with participants, in this case the microteachers.

During the weekly hour-long research notebook response groups, I was invited to share my research about my practice with four microteachers and read my anecdotal records of two of the microteachers. It was through my own growing sense of feeling supported and valued as a member of the response groups that I learned to build this sense of mutual respect and trust in the community of microteachers that I facilitated.

Being a student myself gave me a unique advantage in sharing the same kind of intellectual support and respect with my own students that I found in the research notebook response group. There was less a sense of hierarchy and a greater

sense of democracy between participants who were all students. In their journals, three of the four microteachers continually mentioned their desire to involve every student they were teaching, and expressed their concern that reticent students be given an opportunity to contribute as often as more assertive students. This ripple effect - sharing power and responsibility - passed from me to my students to their students in an ever widening circle of trust, caring, and mutual support.

Finally, in analyzing my students' and my own journals I found that creating a community of engaged learners in our classrooms was the dominant theme. Through this study I also realized the strength of direct written observation as a manner of increasing a dialogue in the journals. In my present position as an Inclusion Specialist for a K-12 public school system, I use this method of direct written observation and feedback to regular education teachers regarding their inclusive practices towards students with severe special needs as one of my primary methods of introducing and encouraging inclusionary practices with their students.

Jim

Making conscious what was unconscious about my teaching career was the focus of my action research project. I collected data in my role as university supervisor during three formal observation sessions for two secondary science student teachers. Each of the three sessions consisted of a pre-observation conference, classroom teaching observations that lasted for two or more teaching periods, and a post observation conference. I used telephone conferences whenever the student teachers felt the need to discuss their practice. I recorded notes from the sessions and the telephone conversations in my research notebook. Critical review of the research notebook was provided by the members of my action research study team and by the action research class through data workshops. My report focused on seven of these journal entries.

This situation afforded me the opportunity to revisit many past teaching experiences while reflecting on my present practice. My aim, throughout this research, was to act as a sounding board, providing as many different view points and options as I could on any issue of importance to the student teachers. The sounding board approach empowered the student teachers to think through their problems and situations while receiving feedback that aided in the clarification of their thoughts. This in turn provided me with the opportunity to examine my educational values and biases.

Barbara

As a teaching assistant, I taught a preservice mathematics course to undergraduate students planning to enter elementary teaching. I learned through my students' writing that the majority of these elementary preservice teachers have negative attitudes and beliefs about themselves as mathematically thinking individuals. This action research project was designed to promote changes in teaching strategies I used in the course. The action research was based on personal self-reflection on each class, reading each students journal entries, and noting student comments during class discussions.

With the assistance of the class response group, each week I shared my notes and got feedback from the response group on suggested modifications for future classes. Meeting with the response group was a critical component of the study. Meetings with the response group helped to clarify and elucidate proposed future actions.

In a data workshop it was suggested that another member of the class gather information from the preservice students using semi-structured small group interviews. Elizabeth agreed to conduct the interviews, from which I found a high

degree of correlation with previous data that I had collected.

The findings have made me more aware of the degree of negativity preservice teachers bring to mathematics and how that negativity must be addressed if it is to be modified during their preservice experience. Also, my role as instructor needed to be redefined to reflect these findings. Many students had expressed anger at having been denied an opportunity to develop their own understandings about mathematics in their earlier schooling. They generally tended to not trust themselves mathematically. With this information it becomes imperative that preservice teachers need to be provided opportunities to become engaged in thinking about mathematics, communicating about the mathematics and, at the same time, to reflect on themselves as doers of mathematics.

John

At the time of the action research course, spring semester, 1994, I was a graduate student teaching assistant in the Secondary Teacher Education Program at the university. In addition to teaching an introductory education class, The Work of the Middle and High School Teacher, I co-taught Principles and Methods of Teaching Middle and High School English, facilitated a micro-teaching seminar, supervised student teachers, and conducted a student teaching support seminar at one of the university's clinical sites. Of all the possibilities for action research on my teaching practice, I chose to focus on the student teaching support seminar. As I recall, there were several reasons for my choice: one, my colleague, Deborah, taught a similar student teaching support seminar at another clinical site, so we could compare notes on what we were doing; secondly, I wanted to develop the seminar in a way that would really be useful to the student teachers, and not be either theory- or gripe-laden; finally, since the seminar was small - perhaps 10 students - and met only once a week, I felt that I could manage the research required for the course.

Along with clear professional goals, there was also a decided practical reason for choosing to focus on the student teaching support seminar.

The starting point speech for the action research course was the place in which I began to explore a possible action research topic. My speech focused on the concept of time, as it seemed to me a major issue in teachers' and student teachers' lives, to wit: there was never enough time to do all the things we had to do as teachers, let alone as teachers and teacher researchers (Peeke, 1984; Wann, 1952). In my speech I argued that the problem was not really time, but our conception of time. I wondered whether or not a reconceptualization of time might not affect teaching practices. The problem is not really time, I argued, not having enough, or finding enough, as though time were actually hiding away in the bottom dresser drawer and all we had to do was rummage through the shirts and jerseys, dig deeply enough and we'd find it. No. The problem is our conception of time itself. Isn't it? I then proposed to raise the time issue with student teachers, encourage them to reconceptualize it, and then see what happened.

In the following student teaching seminars, I did raise the issue of time, but the discussion was more philosophical than practical. In spite of what we talked about, there was in effect still only a limited amount of time for the student teachers to do what they had to do. In subsequent action research classes, Allan asked us often, "How do you know what you know? What data could I collect and analyze that would demonstrate that our discussion of time, our 'new or different conception or time' would actually lead to a broader, deeper inquiry into the cultural influences that shape our lives and teaching?" I wondered.

In the action research class, we read an article by Eisner (1981). In the article he argued that art was a way of knowing, if not exactly a form or qualitative research. He talked about Shakespeare, and the lasting power and insights he offered in his

great dramas. Eisner's article set me to thinking about "ways of knowing." After mulling over the idea, reading about fiction as a way of knowing, and with strong encouragement from my support group, I decided to present my research, especially the issue of time, in the form of a short story. The story was entitled: "Fiction As A Way of Knowing: The Time Bombing of the Royal Observatory." The story was about Diego Timewell, a teacher educator in turn of the century London. In the story I explored issues of time as it related to teaching, and ultimately the idea that fiction was a viable if not valid way of knowing, which could be applied to schooling and learning - and action research.

On the one hand, Allan regarded the story - and its premise - with some skepticism - perhaps a healthy scientist's skepticism. On the other hand, and much to his credit, in subsequent conversations, and especially in the second order action research that eventually served as the basis for this paper, he encouraged the further and deeper exploration of art and fiction as a way of knowing. Eventually I wrote an action research theater as part of a paper our group wrote based on the findings of our second order action research. In that piece, I argued once again that art or fiction had a place in educational research, though it diverged considerably from more recognized or accepted research paradigms (Gabriel, Feldman, Alibrandi, Capifali, Floyd, Hitchens, Mera, Henriques, and Lucey, 1995)

Second-order methods

After we wrote the individual reports we convened as a group to do a cross-case analysis of the individual reports. The rationale for this analysis was that a preliminary review of the literature that indicated that little research had addressed action research as a tool for teaching assistants. Since we were analyzing our own reports while we continued to act in their various roles within the teacher education programs, this process was a form of second-order action research: action

research on the action research process (Elliott, 1991).

Each report was read by two other readers who wrote 2-3 page papers on what they thought were the results of the meta-analysis. In weekly group meetings readers shared their findings and identified a variety of recurring components found in the reports subsequently generating a matrix of common categories (see Appendix F for clarification of acronyms used in the matrices): context (Appendix A); characteristics of preservice teachers (Appendix B); style/genre of the report (Appendix C); data generated or collected (Appendix D and, analysis methods used (Appendix E). A matrix was then completed for each report by two different readers. In our initial examination of the completed matrices we became aware of a number of emergent themes in the reports. Each report was again re-read by two readers to code those themes found in the report. We generated a findings matrix (Appendix F) and reports that included the identified themes and specific examples from the texts. Further group examination and discussion of the completed findings matrix resulted in the identification of three major themes found in all reports: issues of power, professional growth and development, and use of reflective practice.

Findings: A theme of power and voice

The first theme that we recognized in the second-order analysis regarded issues of power that pervaded the teacher education program and school culture in general. This recognition prompted us - doctoral student researchers - to challenge underlying assumptions about empowerment in the teacher education program, the relationship, for example, between preservice students, doctoral students, and professors. We found the duality of our roles difficult to manage. On the one hand we were instructors or supervisors, while on the other hand we were students of the very processes we modeled or taught. What gave us the "right" or "authority" to offer feedback on teaching episodes, make critical suggestions on lesson plans and

respond to student teaching journals? This struggle was felt most acutely when preservice teachers resisted assignments and suggestions. Would they respond in the same way to a full-faculty member and how should we respond? And what was our relationship to the professoriate who were doing the same work, but perhaps guided by different philosophies of education? Ironically, this duplicity and resultant struggle over power was parallel with the experience of the preservice teachers who felt at odds with the somewhat paradoxical aspect of being both students and teachers.

Another issue related to the hierarchical nature of power in the educational community involved an understanding of what constituted acceptable, and therefore publishable, research. While the current state of educational reforms called for innovation and creativity, the publication of such efforts seemed to demand adherence to traditional guidelines, both rigid and linear. This issue, particularly as it related to voice, was discussed at great length by the research group at the weekly meetings. Whose voice was speaking in the research? Does the voice change when moving from first- to second-order action research? How can research be presented in such a way as to be acceptable to the research community, while allowing the voice, as Emily Dickinson would say, to "sing"? It was in answer to that last question that we decided to explore issues of power and voice through the use of a Readers' Theater (Gabriel et. al., 1995), specifically portraying the researchers' discussion on the kind of language appropriate for a conference proposal.

One final note on the issue of voice in the writing of educational research in general and this study in particular. In writing and re-writing this paper, we eventually decided to use the first person singular and plural and thus identify the writer as "I" or "we" or "our" - also Allan, Barbara, Deborah, Elizabeth, Jim, John, and Margaret - instead of using the third person, "he" or "she" or "they." While

acknowledging the difficulties in what amounts to a paper written by a committee, we reckoned that the first person singular and plural voice, would establish the identity of the writers, make the tone more personal, if not give more urgency or credence to the writers' voices.

Themes of professional growth and reflective practice

In addition to the issues of power and voice, a second theme emerged from the meta-analysis of the six research studies: awareness of our own professional growth and development. Being engaged in action research allowed us to not only do "real" research, but to feel qualified and entitled to do such work. As Jim wrote in his research notebook:

> One of the most valuable avenues of self-study included my participation in collaborative groups where we met on a weekly basis to discuss our on-going research and respond to each other's research notebooks. At these meetings we critiqued each other's journals, offered suggestions for engaging in an activity to overcome a problem with a teaching strategy or relationship with an individual student teacher... [we] offered each other encouragement to continue with a project that may present challenges that seemed insurmountable before members of the group were able to open up the problem and discuss opportunities for action.

We credited our courage to engage in risk taking activities, such as instructional change and critical feedback, in part to our personal growth and self-confidence gained through participation in action research, more specifically through the support of the collaborative study groups. Action research literature documents the transformation that participants experience as they engage in intense scrutiny of their own practice and are offered a supportive collaborative group of

fellow practitioners through which they mediate their ideas and refine their practices (Hollingsworth, 1994; Feldman, 1994b).

In addition to learning and refining pedagogical practices, our professional growth as researchers increased, particularly through the process of engaging in second-order action research. We served an apprenticeship of legitimate peripheral participation (Lave and Wegner, 1991) as we were guided through the process of conducting a research study, analyzing it in connection to related studies, coding commonalties, writing a paper based on the findings and submitting that final product for presentation at a professional conference. As members of this community of researchers, we were ushered into full participation through the facilitation and structuring of learning opportunities provided by the graduate faculty of the School of Education. Since all of us in this action research project were experienced K-12 public school teachers, participation in this research study provided entry into the culture of the university by helping us learn how to conduct legitimate research, author academic papers, and publish them successfully. In addition, as Deborah put it, it allowed us access to the culture of the university that values research over teaching.

Reflective practice, the third theme identified in the findings, proved to be the means by which we were able to realize much of the aforementioned professional growth and development. When teachers adopt a reflective attitude towards their teaching, actually questioning their own practices, they engage in a process of rendering problematic or questionable those aspects of teaching generally taken for granted. It is through this heightened awareness of one's work that practice can be enhanced by experimenting with alternative methods and ideas. Thus inquiry, and hence reflective practice, does not accept single ideas without questions: it seeks alternatives.

Using the action research notebooks for self reflection on our practices became an important tool for us as researchers in an ongoing pursuit of professional growth. The notebooks also provided an invaluable place for recording concerns, questions, observations and ideas for change. Reflection, both personal and professional, became an intricate part of our roles as supervisors and teaching assistants. Margaret realized after reviewing her notebook that "Overloading a student teacher with too many suggestions was unproductive in my experience with microteaching students." Similarly, Jim, came to understand, "that the power of experience lies in the opportunity to provide a number of different perspectives, different points of view to a situation." As a result of critical reflection, both Margaret and Jim were able to validate a given point of view, and alter their practices accordingly.

Perhaps the most striking of the results was the parallel between our research as doctoral students and similar concerns in the preservice and student teachers' own reflective practice. One student teacher commented, "I wouldn't keep it [reflective journal] if I wasn't getting something out of it. It is not just that I answer my questions; the answers have generated better questions about what I'm going to do next." After stepping back and reflecting on her role in the classroom, another student teacher attempted to alter her practice in such a way as to more actively engage her student in the learning process. "I mean to encourage all of the students to talk. Not only is it important for teacher/student feedback, but for the students to converse with one another. This is a fundamental step in the learning process!" Schön wrote that reflective learners, in order to move forward, must move into the center of the learning situation, into the center of their own doubts (1983). Action research is one vehicle that propels researchers into those centers.

Finally, this paper has evolved over two years, through several revisions.

One of the revisions, included in this writing, was the addition of our individual accounts of the first-order action research projects. In analyzing the content of those accounts, we add here a fourth major finding: the significance of the research notebook response groups. Each of the us spoke about the importance of those groups, and the many engaging and instructive conversations (Feldman, 1995) in the groups. Perhaps nostalgia played a part in our identifying the importance of the collaborative groups. We had grown close, were now separated and going our own ways. Did we simply miss the bosom comfort of our former circle? Or perhaps we merely understated the value of the group as we first analyzed our papers and reported our initial findings. At the time of the second-order research, we were, after all, still together. Absence not only made the heart grow fonder, but enabled the discerning eye to see just what was important in this process from start to end. In so stating the importance of our collaboration, then, we identified as a major finding the importance of human communication in the research process, bearing in mind the applications of social science to the human - children and adults - condition.

Conclusions

As we end our paper on our action research studies, we find it important to note that specific and focused research on the work of the graduate students who serve as we do in these capacities is lacking; the work of graduate students in teacher education remains a rarely studied phenomenon. Indeed, preliminary research on the roles of graduate students in teacher education programs done by Marsha Alibrandi, a fellow graduate student student teacher supervisor who joined us in year 2, yields an evident gap. In research institutions where graduate students assume many facilitative roles, the work of these students appears virtually invisible in reports on teacher education. While some institutions provide training for "tomorrow's professoriate" (Holten & Nilson, 1990), schools of education make

no such explicit claim save for a few cameo training programs (Lourie, 1983, Bain, 1991).

Where we do find some evidence of research on graduate students in teacher education is in literature on student-teacher supervision. Case studies of individual programs have illustrated the contributions of graduate students in the roles of university supervisor and methods instructor (Bain, 1991; Ludlow & Platt, 1988; Turner et al, 1987; Wheeler, 1989). Hidden in the comments of students from a major public institution (Soder, 1989) is a single student-teacher's reference to the numbers of graduate students teaching education courses in a program evaluated by the Center for Educational Renewal.

Instruction, practicum supervision, and advising are all elements of graduate student teacher education practice mentioned in the scant literature available (Lourie, 1983; Cornbleth and Ellsworth, 1994). The role conflict Lourie (1983) attempted to identify is seen by Anne DiPardo as a transition from classroom teacher to graduate student without benefit of a rite of passage. Graduate students in teacher education find themselves "between two worlds;" the worlds of practice (or "reality") and theory (at the university). They find themselves struggling with issues of mutually exclusive language and their own voices as bridging gaps between those languages.

Although identity issues focused on our common experiences as teachers and supervisors, our action researchers' experiences reflected some of the role conflicts experienced by contributors to Tokarczyk and Fay's Working-Class Women in the Academy; Laborers in the Knowledge Factory (1993). As we struggled with our new roles, which were largely undefined and tentative, we both experienced and identified issues of power, voice, and reflective practice as central to the struggles of our own and our participants' experiences.

In researching our roles in this study as doctoral students in teacher education programs, we have demonstrated the importance of doctoral student researchers' roles in teacher education programs, and have attested to the critical role of action research in such roles and programs. This study suggested that peer collaboration was fundamental to action research, and to changing the perception -- and too often the reality -- of teachers isolated in their own classrooms. Action research embedded in a teacher education program united those in the program in common goals and mutual support, as it promoted individual growth and development and - theoretically - program reform. While we acknowledged instructional changes in our own practices, and general enthusiasm for the collaborative nature of the action research, and for action research itself - as an agent for change - questions remained about whether or not doctoral students' research and recommendations would effect actual program changes.

Although graduate students clearly constitute a significant population in the teaching of teachers, both formal and informal recognition of that contribution are lacking. In this study we described the tensions of our shift in roles and responsibilities form classroom teachers to graduate student teaching assistants and supervisors in our first-order action research. In our second-order action research, we began to identify the theoretical frames that enabled us to practice and reflect on our own as well as our participants' experiences as theoretical phenomena. This shift from the practical to the theoretical proved to be not without difficulty in the way of perceived identity "gains and losses," during as Anne DiPardo describes it, "the confusion of their transitions" (DiPardo, 1993; p.208-9).

The picture of graduate student involvement in teacher education is far from complete; there are too many unanswered questions about who and where they are, let alone the substantive questions about what it is these educators do. We need to

know more about the work of graduate students in the roles of novice faculty, as researchers in teacher education, and as providers of training and support for preservice and student-teachers. This action research study, then, attempted to provide some qualitative data on the substance and nature of the work and transition of graduate students in teacher education. The study's uniqueness, while not limited to its origins in the reflective practice of these practitioners, was enriched in that it was framed by us, by our experiences, and in our own voices.

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Appendix A: Context Matrix

Case	Role in preservice teacher education program	Location	Required/ not required	Content specific or general pedagogy
Barbara	Instructor	Principles and Methods	required	Content specific
Deborah	510 Instructor	public schools	required	general pedagogy
Elizabeth	Resource/ supervisor in ETEP	public schools	required	general pedagogy
Jim	Supervisor in STEP and MESTEP	public schools	required	content specific
John	510 Instructor	public schools	required	general pedagogy
Margaret	Supervise student teacher feedback micro-teaching	in public schools/in microteaching lab	required	general pedagogy

Appendix B: Characteristics of preservice teachers

	Characteristics of preservice teachers			
Case	Grad, undergrad, Post BA	Gender (percentage, ratio, totals)	Subject areas	Age (average, spread)
Barbara	mixed all	94%F 6%M	math	20-40
Deborah	Mixed all		all	
Elizabeth	undergrad	100%F	Elementary Ed	20-25
Jim	grad	1M, 1F	biology, chemistry	
John	Mixed all	7F, 6M	all	21-33
Margaret	mixed all	2M, 2F	English and social studies	20-29

Appendix C: Style/Genre of Report Matrix

Case	Overall style of report: Fiction, essay, personal narrative, expository, scientific report, etc.	Point of view	Amount of reflection	Amount of direct reference to data
Barbara	Research report	Author's	yes	yes
Deborah	Thematic	Author's	referred to AR journal frequently	references and quotes
Elizabeth	Essay	Author's	A great deal	a great deal
Jim	Personal narrative	Student teachers	considerable	considerable
John	Fiction	Omniscient		
Margaret	Narrative Thematic	Author's	yes/heavy referred to AR journal less frequently	yes Many references and quotes

Appendix D: Types of data generated or collected

Case	Interviews	Observations	DSR journals	PST journals	PST self-reflection papers	Surveys or questionnaires	Study group/data workshop feedback	PST work
Barbara	√		√	√	√		√	
Deborah		√	√	√			√	√
Elizabeth				√	√	√	√ (data workshop	
Jim		√ mostly	√					√
John		√	√	√				
Margaret		√	√	√			√	√

Appendix E: Analysis Method Matrix

Case	Thematic Coding		Episodic	Holistic
	Pre-specified categories	Emergent categories		
Barbara		√		
Deborah	√	√	√	
Elizabeth	√		√	
Jim		√	√	
John				√
Margaret		√		

Appendix F: Findings Matrix

	Barbara	Deborah	Elizabeth	Jim	John	Margaret
Action research process						
Change/personal growth (DSR)	√					√
Change/personal growth (PST)	√	√				√
Comfort level/fear/terror/ vulnerability	√	√	√	√	√	√
Conversation						√
culture		√	√		√	
Diversity of roles/purposes		√	√		√	
Duality: teacher/learner	√	√	√			
Empowerment of DSRs				√		√
Empowerment of PSTs	√		√	√		√
equity/ethnicity		√				
Experience as practitioner				√		√
gender		√				
Genre/style of report	5 step thematic	thematic	essay	journal	fictional narr	thematic
Hierarchy/power		√			√	√
Identity of researcher (students, teachers, URs, multiple)			√			√
Issues of teacher education	√	√			√	

Appendix F: Findings Matrix (part 2)

	Barbara	Deborah	Elizabeth	Jim	John	Margaret
Metacognition in research journal process (DSR)	√	√		√		
Metacognition in research journal process (PST)	√	√				
Recognition of self as researcher (DSR)	√			√		√
Relationship between schools and UMASS		√				
Relationship to school (student) teacher		√		√		
Role of feedback to PSTs	√		√	√		√
Role of reflection (DSR)		√	√	√		√
Role of reflection (PST)	√	√	√			√
Voice/point of view						
Collaboration				√		

Appendix G

In order to clarify some of the acronyms and coding used in the appendices, we provide the following brief information. In Appendix A and Appendix C codes are used to identify some of the programs the doctoral student researchers (DSR) were connected with. PST refers to Preservice Student Teacher, generally undergraduates, but in some cases they may be graduate students or post BA students. The doctoral student researchers all had a role in the Preservice Student Teacher Education Program at the University. Their specific roles can be identified in the second column of the Context Matrix. (The first column lists the names of the doctoral student researchers.) Course 510 is a course designed for those preservice students pursuing certification at the junior and/or senior high level. STEP refers to the Secondary Teacher Education Program and MESTEP refers to the Math, English, Science Technology Education Program, both involved with pre-service education courses, and middle and high school teacher certification.

Two of the doctoral student researchers worked with preservice teachers at the elementary level. ETEP refers to the Elementary Teacher Education Program where Elizabeth supervised preservice students during their student teaching. Barbara was an instructor for the math methods course, required of the program prior to student teaching. We were all involved as teaching assistants in required components of the Preservice Student Teacher Education Program at the University.